REMARKS

Formal Matters

Claims 24-33 were examined. Claims 24-27 and 33 were allowed. Claims 28-32 were rejected. The amendments to the claims made herein do not add new matter and are completely supported by the application as originally filed. Claims 28-31 directed to a cell or tissue from a transgenic mouse, a targeting construct and methods of producing the targeting construct are supported, throughout the specification, at for example, pages 9-11, at page 51, lines 15-32, and page 53, lines 3-7 of the specification. Support for claim 32 directed to transformed cells may be found, for example, at page 3, lines 4-14 of the specification. As such, no new matter has been added.

Amendments to the claims are made without prejudice to the pending or now canceled claims or to any subject matter pursued in related applications. Moreover, the amendments are made solely to expedite prosecution of the application and are not intended to limit the scope of the invention. Applicants reserve the right to prosecute any canceled subject matter at a later time or in a later filed divisional, continuation or continuation-in-part application.

Upon entry of the amendments, claims 24-33 are pending in the instant application. Applicants respectfully request reconsideration of the application in view of the amendments and remarks made herein.

A. REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH.

Claims 28, 29 and 32 stand rejected under 35 U.S.C. § 112, first paragraph for allegedly being non-enabling to one skilled in the art to make the invention commensurate with the scope of the claim. Specifically, the Office Action asserts that the specification, while being enabling for a homozygous transgenic mouse that exhibits one or more phenotypes set forth in claim 29, a cell or tissue isolated from the transgenic mouse comprising a homozygous disruption in an endogenous mTMT gene and a mouse ES cell transformed with the targeting construct as set forth in claim 32, does not reasonably provide enablement **for all progeny produced** from the mating of the chimeric mouse according to step (c) in claim 29, for tissue isolated from the

transgenic mouse comprising a heterozygous disruption in an endogenous mTMT gene or for all cells transformed with the targeting construct. Applicants have adopted Examiner's suggested modifications, or addressed Examiner's rejection, by: 1) inserting language directed to transgenic mice having a homozygous disruption in an mTMT gene; 2) inserting language directed to methods of producing transgenic mice where the progeny of the transgenic mice have a homozygous disruption in a mTMT gene and 3) inserting language directed to embryonic stem cells (ES cells).

Applicants submit that pending claims 28, 29 and 32 as amended herein, are fully enabled by the teachings of the specification. As such, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 112, first paragraph.

B. REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH.

Claims 29-31 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly omitting essential steps. In particular, it is asserted in the Office Action that claim 29 does "not include a step directed to producing a mouse comprising a homozygous disruption of the mTMT gene. Amending the claim to include a step wherein heterozygous mice are selected and bred to produce homozygous mice having the genotype and phenotype set forth in the claim would overcome this rejection." (Office Action, page 5) Applicants have adopted Examiner's recommendation and have amended claim 29 accordingly. Regarding claims 30-31, it is asserted that "the targeting construct would not be capable of producing a mouse according to the process recited in the claims. Amending the claim to indicate that the targeting construct can be used in a process of making a transgenic mouse (e.g. the targeting construct when introduced into a murine embryonic stem cell, *can be used to make* a transgenic mouse . . .) would overcome this rejection." (Office Action, page 6) (emphasis in original). Applicants have adopted the recommendation and have amended claims 30 and 31 accordingly.

Applicants submit that pending amended claims are definite and particularly points all essential steps of the invention. As such, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 112, second paragraph.

CONCLUSION

Applicants submit that all of the pending claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

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